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ATTITUDES TOWARDS POST-CONSUMER PRODUCTS IN ONTARIO

JULY 1979



Waste
Management
Advisory Board



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PREPARED BY

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FOR THE

WASTE MANAGEMENT ADVISORY BOARD

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ONTARIO MINISTRY OF THE ENVIRONMENT

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The conclusions and recommendations in this report represent only the views of the consultant and are not necessarily those of the Waste Management Advisory Board or the Ministry of the Environment.

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INTRODUCTION

At the outset, the objective of this study was to delineate attitudes toward recycling, extended product lifetimes and second-life use of products held by various sectors of society, industry, labour, government, the general public and various component groups. It became quickly apparent, however, that general attitudes were not a suitable subject for study, because resource conservation, recycling and associated principles and practices have very much become "motherhood" issues. If it is true that everyone agrees that resource conservation is a fine thing, then why isn't everyone acting accordingly? To answer this question, that is to decipher the reasons for the discrepancy between attitudes and behaviours exhibited by all groups to varying degrees on the question of resource conservation, is the objective of this study.

In order to determine the rationale for attitude-inconsistent behaviour, our research has gone beyond the strict documentation of attitudes. Policy statements and attitude surveys, as well as more analytical reports and studies identifying existing practices, recycling efficiencies, pilot program results and similar information were reviewed. All materials referred to are footnoted at the end of the appropriate section.

Two types of data gathering were employed. Section 3 presents data gleaned primarily from a literature search, although some assistance and information were obtained through discussions with several key individuals spanning the different sectors investigated. Subsection 3.6 presents a summary of the theory of attitudes and behaviour. Section 4, supported by the appendices, presents results from original survey research carried out during the course of the study, to obtain information about the attitudes of several groups for which little or no documentation is available: new product retailers, retailers of post-consumer goods and their customers. Section 1 presents a summary of these data and Section 2 our conclusions.

A complete treatment of the subject matter and scope of this study would require a great deal of research with several iterations to refine the research design and address newly raised questions far beyond the limited resources available for this study. Instead, this report is intended to present an introduction to the nature and issues of attitudinal and sociological research related to resource conservation and to identify some gaps where further work could prove fruitful. Also, some specific problems are identified and discussed.

GLOSSARY

Attitude - a settled viewpoint or mode of thinking on the part of an individual about a particular issue or group of issues.

Fashion Outlet - a retail outlet selling primarily eccentric, avant-garde or high fashion apparel, as opposed to a utilitarian outlet selling primarily functional goods with little or no current fashion component.

New Scrap* - material discarded during a manufacturing or processing operation and which cannot be directly fed back to that operation.

Old Scrap* - worn or discarded material from articles which have been removed from service at the end of their useful life.

Post-consumer Product - a good which has passed through at least one consumption cycle and goes on to further consumption either as a used good in the same function as originally intended, or as an input to another manufacturing process.

Reclamation* - the activity of making available for further use or reprocessing a product or article which would otherwise be regarded as waste.

Recycling* - the activity of reprocessing waste or scrap into usable form.

Recycling Efficiency* - the proportion of material actually recycled, expressed as a percentage of the total quantity of material available for recycling.

Scrap* - that portion of solid waste which can be economically recycled.

Secondary Resources - see Scrap

Second Life - the length of time that a product or article is used in its original form and for its original purpose, after it has fulfilled its initial purpose for the original consumer, e.g., lifetimes of a reconditioned appliance being sold to a new owner, an appliance being relegated to part-time or supplementary use only, or handed down children's clothing.

Solid Waste* - discards resulting from human production, use and consumption.

Source Separation - separation of scrap from waste in the home or directly at the initial point of disposal.

Waste Reduction - the process of reducing the amount of waste generated through means such as reduced product consumption, reuse of products, extended product life or reduced material and/or energy per unit of product.

* Taken from F. T. Gerson, Materials Recycling, Science Council of Canada, April 1977.

1.0 SUMMARY

i) Manufacturing:

Because of the sparseness of data on materials flows and recycling efficiencies, it is difficult to draw any firm conclusions about the practice of recycling among different industry groups. Studies suggest a significant degree of recycling of new scrap, particularly in the paper and metals industries, and much lower albeit poorly documented levels of old scrap recycling. There are some differences apparent among the various industries in their attitudes towards and knowledge of recycling, as reflected in the perceived barriers to recycling.

A general apathy is prevalent among Canadian industry toward market development and product research where secondary resources are concerned. Government support in the form of research and subsidies is favoured by all industry groups. Although representatives of primary and secondary manufacturing industries advocate more direct and stronger government involvement in the regulation, promotion and operation of recycling programs, considering it necessary for the achievement of higher recycling levels, the Canadian Association of Recycling Industries opposes such direct government involvement in recycling. Fiscal and freight rate policies are often seen to be barriers to recycling because it is considered that they offer advantages to virgin materials competition.

Education of the public as well as product designers, specification writers and purchasing officers about the possibilities and benefits of recycling is a frequently identified need.

ii) Retail:

Documentation of the retail industry's position has focused almost entirely on the "returnables" issue. Out of self-interest, retailers oppose returnables in favour of resource recovery, citing as their rationale public demand for the convenience of throwaways, with some support from the data. This does not, however, take account of the role of advertising and the packaging industry nor of the influence of retailers themselves in promoting consumer behaviour.

iii) Labour:

Labour organizations in Ontario have a lengthy history of involvement in environmental issues, but they offer their support and goodwill in the form of a bargain. Labour will support conservationist policies, but they must be in the context of a comprehensive environmental policy, including occupational health and safety provisions for workers. Furthermore, labour must not bear an inequitable burden of the costs of resource conservation and environmental protection. These costs must be distributed over all of society. Strong government intervention to ensure fair distribution of these costs is advocated by this sector of society.

iv) Government:

A rational delineation of roles appears to be emerging among the three levels of government. The provincial role is critical to the development of improved solid waste management insofar as it entails research into resource recovery technology and waste reduction techniques, marketing and economic policy development and operation or support of pilot projects and programs. Shortcomings identified here include the lack of a high profile, centralized body to co-ordinate research and provide policy advice to the provincial government on all aspects of resource conservation. There is also inadequate political pressure at the provincial level to counteract vociferous opponents to specific conservationist policies. Additional pressure from the provincial level is also needed to promote improved data collection on materials flows at the national level.

v) General Public:

Over recent years, the general public has apparently remained generally ignorant about the subjects of garbage disposal and resource conservation. Correspondingly low rates of participation in many recycling programs are reported. In addition to level of knowledge, convenience is often identified as a factor significant to the success of such programs. Nevertheless, attitudes among the general public have been found to be consistently positive on the subject of recycling and garbage separation programs, most respondents indicating a willingness to participate. Support for government involvement in recycling and waste reduction programs is widespread among the general public.

vi) Post-Consumer Shoppers:

Our own survey research documenting the views and preferences of post-consumer product shoppers and post-consumer product retailers identified a high rate of market expansion for specialty and high quality post-consumer product outlets (the boutique style) compared to the markets of the more utilitarian, goodwill style outlets which act primarily as a clearing house for used goods with little or no value added to the products.

The most frequently mentioned reasons why people shop at post-consumer outlets are to save money and to seek specialty items not elsewhere available. Most post-consumer product shoppers' family income is reported to be less than \$8,000, but, significantly, 20% indicated a family income greater than \$22,000. Apparently, an increasing proportion of the post-consumer market consists of relatively affluent, frequently professional people seeking good quality at reasonable prices. The stigma associated with used merchandise, especially clothing, is waning and there is some reason to believe the market for post-consumer products could expand.

vii) Post-Consumer Retailers:

Managers or owners of a wide variety of retail outlets specializing in used or remanufactured goods were interviewed. None of the businesses studied had engaged in any market research in the course of its history. The clientele of more specialized and fashionable outlets are reported to be younger and more "middle class" than shoppers at utilitarian outlets. This trend indicates a diversification of the market resulting from the advent of the new boutique genre of post-consumer product retail outlets.

Interestingly, increased acceptance of post-consumer products and resulting market growth is frequently related to the image of the retail shop, underlining the importance of the manner in which a proposition (i.e., buy used) is communicated to the public (mode of communication). Clearly, however, this is only one aspect determining acceptability, as demonstrated by the reported poor reputation of reconditioned appliance dealerships resulting primarily from a poor service record. Shifts in supply sources favour an increase in higher quality, post-consumer retail outlets, there being a decrease in good quality donations and a corresponding increase in consignments from individuals. Provincial and federal regulation and taxation were identified as bothersome and sometimes major barriers to these businesses.

viii) Retailer Survey:

A high level of concern about resource depletion is found among new product retailers of appliances and furniture, but there is an apparent failure to recognize the direct link between solid waste management and resource conservation among some of these individuals. This suggests a need for better public education about solid waste management. Some retailers have the means and influence to make sophisticated input on product specifications directly to manufacturers, but there is a need for a mechanism to provide such input from a broader base including smaller retailers.

A significant difference in consumer (and therefore retailer) product selection criteria is reported. Appearance and style are reported to be paramount (and also very changeable) for furniture, durability and associated service being most important for appliances. To a degree, this is very understandable, considering the different nature of these products, but the reported almost total lack of concern for quality as a selection criterion in furniture, at least in comparison with style and price considerations, is contrary to expectation. Further research into the nature of consumer choices, and particularly the relative influences of manufacturers, advertising and media determining these is needed. Due to these perceptions, only appliance retailers are willing to promote their products on the basis of durability. Also, while all respondents feel greater use should be made of recycled materials, they do not favour better labelling of recycled content on products "because it's not a selling point with the public," and because they feel that the public expects products containing recycled content to be priced lower.

Further, possible barriers to increased durability of products from the retailers' viewpoint are technological change and economic impact. Technological improvements may render products obsolete before the end of their lifetimes, and the relationships among product life, volume of production, rate of turnover and labour requirements must be carefully described and analysed if the best arguments for resource conservation are to be developed. In general, however, it would appear that efforts to improve recyclability and recycled content of furniture and other style and fashion oriented products would be more fruitful than efforts to increase durability. This is not so for more strictly functional products which do not have a status value attached to them, such as appliances. Efforts to increase durability of these products are more likely to prove rewarding.

ix) Theory of Attitudes:

To determine the significance of attitudes toward recycling and other components of resource conservation, intervening factors which either mediate or hinder the translation of attitudes into behaviour must be identified. Our research identifies four such factors:

- information and knowledge
- conformity with social norms
- convenience
- cost.

Knowledge of the desirability and availability of resource conservation programs is, of course, critical to the translation of a favourable attitude into appropriate behaviour. Conformity with social norms refers to the social pressure felt by the individual to act in a certain way (e.g. to recycle or compost). Two secondary intervening factors are also identified:

- mode of communication
- environmental design.

The way in which programs are communicated affects both the information available to the individual and also the normative social pressure associated with a program. Environmental design, in turn, has a major effect upon the cost and convenience factors.

2.0 CONCLUSIONS

Two conclusions of a very general nature are drawn. First, resource conservation is, for all intents and purposes, a "motherhood" issue today. None of the interviewees, none of the documented attitudes and none of the research reported on took issue with the fundamental premise that more conservationist use of our natural resources was a necessary and commendable objective. Secondly, however, there is no question that a great many barriers lie in the way of achieving that objective. To say that these barriers are attitudinal would in most cases be incorrect, strictly speaking. There is, however, an attitudinal component to them, insofar as it may be argued that a more determined and positive attitude could help overcome existing problems.

The ultimate objective of research of this nature is to assist in the promotion of behaviour supportive of good waste management and resource conservation. To this end, we have presented a model identifying the key intervening factors determining the relationship of attitudes to behaviour: social conformity, knowledge and information, convenience and cost. This model is presented in the context of a discussion on public attitudes, but it serves also to illuminate corporate or organizational behaviour. The main difference between corporation and individual is one of emphasis and control. The corporation is motivated primarily by considerations of cost and profit, and operates in an environment of competition and government regulation. It also has greater resources to access and control information than the individual, whose decisions are based much more on considerations of social conformity (status, peer group pressure) and personal convenience, as well as cost.

The research has found highly positive attitudes toward resource conservation, recycling, extended product life and other related principles of good solid waste management, but only a partial and inadequate behavioural response to this attitude. Why aren't people doing what they say they will do? To answer this question, we focus on the identified intervening factors.

The foundation upon which all attitudes and decisions for action are based is information and knowledge, whether accurate or not. On this count, all sectors investigated were found to be lacking in the information necessary to get on with the job. The lack of available data to indicate material flows and present recycling efficiencies was frequently mentioned. How can realistic targets be set and

progress be monitored if we don't know where we stand today? Implementation of the Canadian Waste Materials Exchange will contribute to remedying this shortfall in marketing data, but to ensure a comprehensive and complete data base, Statistics Canada will need to become involved in the collection and analysis of data on resource streams, including new scrap and old scrap cycles and recycling efficiencies.

More specific information needs are also identified. One of the more controversial issues associated with recycling focuses on the cost of handling and storage of returnable bottles, yet no scientific investigation of these costs has been made public. An area which, to date, has received little attention is the study of the effects of product durability. How do technological innovation and increased product durability impact effective product life? How do these affect labour markets, and what is their relationship to product warranties? And in the area of consumer behaviour, on what basis do consumers select various products, and what are the relative influences of the advertising industry, the media, manufacturers and retailers on consumer choice patterns? This is by no means a complete shopping list of information needs, but serves to point out the wide range of research areas to be covered.

In addition to the need for generating and disseminating new information, the research found several indications of a need for better education programs in all sectors, even where currently available information is concerned. In the private sector, some apparently uninformed attitudes prevail, such as the view that freight rate structures discriminate against scrap haulage in favour of virgin materials. Findings also raised the suspicion that the link between good waste management practices and resource conservation is not altogether clear in the minds of retailers. Industry representatives and expert consultants frequently singled out the general public as needing to be educated on the issues associated with resource conservation. Indeed, our findings confirm a general low level of knowledge among the public about garbage disposal methods and costs, and about recycling programs. Also, the reported perception on the part of the public that products made from recycled matter should be cheaper "because they are recycled" is a notion which, if confirmed, needs to be dispelled. Finally, it is suggested that better public education about product care and maintenance could add significantly to product lifetimes of many items.

The matter of education addresses two of the intervening factors identified as mediating between attitudes and behaviour, for as well as providing the means for developing a broadly based public knowledge, education programs are instrumental in creating a social pressure for society to move in certain directions. The creation or reinforcement of social norms supportive of a conservationist philosophy can only be achieved through education and/or necessity. It is clearly preferable from an implementation point of view that changes be initiated and accepted before necessity forces them. An understanding of the issues serves to facilitate behavioural change and minimize social and political disruption associated with change. As well as creating social pressures to conform to more conservationist lifestyles, education programs create political pressure for regulatory action. On at least one count (non-returnables) we have seen government efforts to implement conservationist policies turned back by specific opposition interest groups. Greater political pressure (as well as negotiated compromise solutions) is clearly needed to raise conservation issues to a higher place on the politicians' agenda. Studies have found that interest group lobbies have a great deal of influence in determining this political agenda.

Education programs should take maximum advantage of existing delivery systems, concentrating on the development of curricula at all levels, including community colleges and continuing education and should focus on topics such as product durability, materials recycling in the home, nutrition, energy use and low environmental impact lifestyles. Co-operation in program development and scheduling with the Ontario Educational Communications Authority could be helpful. Another suggestion considered worthy of more detailed investigation is that training for specialists in materials classification and recycling in industry and in the home be offered at the Colleges of Applied Arts and Technology.

A third area which emerges as significant in its effect upon the translation of attitudes into behaviour is the nature of the government-industry-labour interface. Taken together, the findings from earlier research and statements by interviewees project an image of considerable confusion and suspicion surrounding the relationships of these sectors, one to the other. Even government representatives identified lack of political co-ordination as a barrier to increased recycling. At the same time, most representatives of labour and industry favoured a stronger government role in resource conservation programs and the general public also favoured strong government action. Hence, the impetus for shaping the nature of the government-industry-labour relationship in resource conservation lies clearly with government.

Government may take a greater or lesser role in resource conservation programs, through the activities of education, regulation, administration of incentives to industry, and direct involvement in capital projects and resource marketing. At the provincial level in Ontario, these activities are now split among five jurisdictions: Ministry of the Environment, the Waste Management Advisory Board, the Ministry of Industry and Tourism, the Ministry of Natural Resources and the Ministry of Energy. This dispersion of resource conservation activities among many different government departments does not facilitate the previously identified objective of enhancing public information and education on resource conservation.

There is, at present, no clear focus of conservation policy development within the provincial government. Bringing together all conservation programs of government under a single body would facilitate co-ordinated program implementation and strong policy development and, at the same time, provide a higher profile to these policies so necessary to fulfilling the leadership role expected of government. Not only would information and education functions be enhanced in this way, but the development of a societal norm supporting resource conservation would be facilitated through the appearance of leadership in this area. Both information base and social conformity have been identified as important factors in promoting conservationist behaviour.

Regulation (or lack of it) and direct involvement in capital projects are the activities which have created the greatest amount of suspicion and mistrust of government on the part of industry and labour. It is essential that this mistrust be dispelled, and the most direct way of doing so is through the active participation (with a financial commitment) of these groups in policy development and pilot programs. Furthermore, inclusion of these groups in research and development and in pilot projects would ensure maximum use of their diverse expertise and co-ordination of activities across sectoral lines.

Together with the need for a more centralized management of conservation programs and high profile policy development, the need for more active co-operation of labour, industry and government in resource conservation programs could be achieved by convening a body consisting of representatives from these three sectors and from consumer groups. This body could act as a Board of Directors for the provincial agency managing conservation programs. It is important to distinguish the functions of such a Board from those of an advisory body, insofar as direct responsibility for, and involvement in, policy development, and program management is considered essential to evoke creativity, co-operation and compromise across the various sectors.

FIGURE A

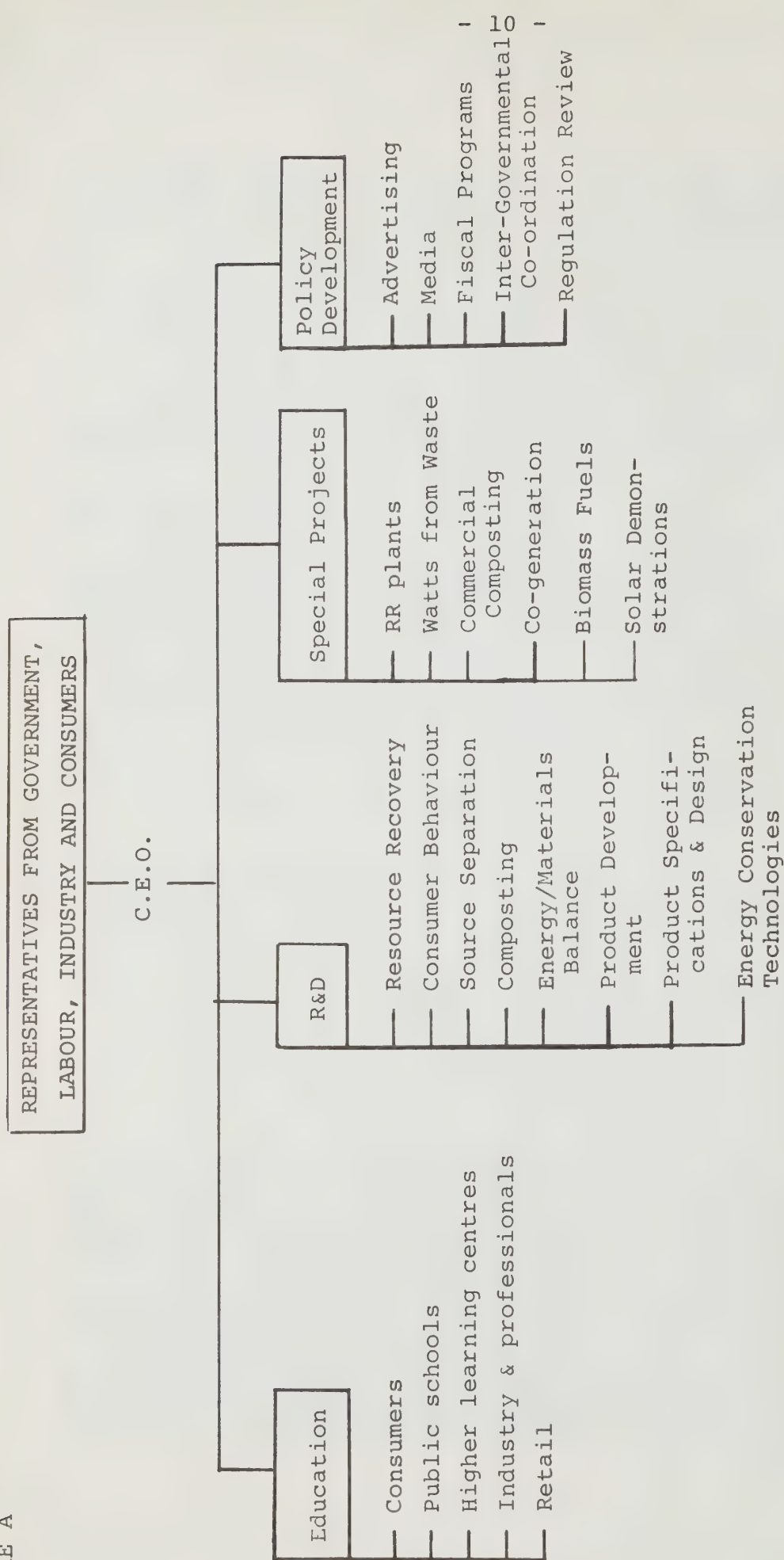


FIGURE A: Scope of Activities of Centralized Provincial Conservation Management.

By way of illustration only, Figure 'A' sets out the scope of program and policy development responsibility that should fall within the mandate of an agency responsible for resource conservation in the province. The agency, tentatively named the Resource Conservation Council, should consider all these aspects in its deliberations. Consideration should also be given to the appropriate reporting level of such a council or agency. Because the scope of resource conservation programs and policies spans the traditional areas of responsibility of several ministries (Environment, Energy, Industry & Tourism, Natural Resources), it may be desirable to have the council/agency report to the government at the Policy Field level.

It is also proposed that opposition to conservationist policies from interest groups directly impacted could be overcome through negotiation and innovative program development to mitigate negative effects. Retraining programs for displaced workers and government participation in plant conversions are examples of mitigating measures which have been suggested. There is no question that such a policy would cost the taxpayers money, but in an era when governments are competing for job creation by offering cash inducements to industry to locate within their jurisdictions, it makes sense to invest public funds in job-creating programs which have the added benefit of implementing a policy which has heretofore been thwarted. For example, analyses have shown that banning soft-drink cans would create a labour displacement but no absolute loss in number of jobs. Investment in the retraining of pop-can producing workers and conversion of pop-can plants would, therefore, amount to a direct investment in jobs, as well as facilitate the achievement of a long sought-after policy objective. Detailed analyses of the cost per job created in such programs should be undertaken.

Several other, more specific conclusions bearing upon the role of government can be drawn. It has often been suggested that a disposal tax be imposed upon products and packaging in accordance with the amount of solid waste they generate. This is seen as a highly unwieldy process which would likely generate considerable opposition. The observation that the annual cost of garbage disposal in Metropolitan Toronto is \$100 per household, and rising, suggests an alternate approach. If this sum were billed directly to the property occupant, rather than be hidden in taxes, it would serve as an educational tool, a constant reminder of the escalating cost of waste disposal and the need to minimize waste. While this procedure would not act as a direct inducement to reduce household waste because there could be no immediate saving to the individual resulting from a reduction, it would nevertheless raise the issue in the public eye.

It was also found that consumers are reluctant to pay sales tax on used goods and that some government regulations pose real barriers to the post-consumer retail industry. Particular concern with import restrictions, virgin material requirements and sales tax on used goods was found.

Finally, statements from the general public and post-consumer retailers indicate an increasing acceptance of recycled and second-hand products. Taken together with the reported wide-ranging support for strong government involvement in the management and conservation of resources, we conclude that the time for action is NOW.

The conclusions relating to more centralized conservation policy development and program management require careful consideration and are of a long term nature from the point of view of implementation. The other conclusions, however, lend themselves more readily to the formulation of recommendations, as follows:

1. It is recommended that the government of Ontario work closely with Statistics Canada, other provinces and industry to develop guidelines for the collection and dissemination of materials and energy flow data, with a view to establishing a national working group to consider data needs of policy-makers in areas of resource conservation and solid waste management.
2. We support the recommendations of Paehlke (1977) and Middleton (1975) that a comprehensive strategy of conservation education programs delivered through schools, unions, community groups, co-operatives, business and retail associations be implemented.
3. It is recommended that municipalities be strongly encouraged to institute direct occupant billing for garbage disposal.
4. A general review of provincial and federal regulations to ensure the removal of needless barriers to recycling and the post-consumer industry is recommended, with particular reference to import restrictions, virgin material requirements and removal of sales tax on used goods.

3.0 DOCUMENTED ATTITUDES

Because of the changeable nature of attitudes, those who document attitudes must be careful not to reach too far into the past unless for comparative, historical purposes. For purposes of this study, it was considered unwise to assume that any attitudes documented prior to 1973 (the year of the energy crisis) would necessarily be intact today and, in fact, only one reference predating the energy crisis was used. While there is no "guarantee" that attitudes discussed here are current and representative of sectors to which they are attributed, an effort was made to report only those attitudes put forward by several representatives and appearing to be central positions of some consistency. Of course, the difficulty of attempting to distill the attitudes of several large, heterogeneous groups into a few statements is self-evident and should always be kept in mind. In part to compensate for this difficulty, attitudes are frequently compared with findings of more scientific, analytic studies to assess their degree of congruence with more scientific findings.

Sources of documentation include materials from the libraries and files of provincial and federal government agencies, the Ontario Federation of Labour, the IS FIVE and Pollution Probe Foundations, the Toronto Recycling Action Committee, a consulting firm involved primarily in energy and materials recycling work and interviews of a number of individuals involved to varying degrees in solid waste reduction and resource conservation.

3.1 Manufacturing Industry

Several reports investigating various aspects of recycling in the paper, metals, glass and plastics industries have addressed, to some extent, the matter of non-economic attitudinal and structural barriers to materials recycling. Of the studies uncovered, however, only one focused specifically on attitudes towards recycling among members of industry, as well as various levels of government. (1) Other studies addressing the role of industry in materials recycling include the work of Donnan (1976), Provias (1977) and Gerson (1974, 1976 and 1977), but these focus primarily on economic, legislative and structural factors affecting recycling, rather than attitudinal ones. They are important to consider, nevertheless, since they provide at least some factual, scientific data against which reported attitudes may be measured to ascertain the degree to which attitudes in and of themselves, regardless of external realities, represent barriers or inducements to recycling.

The general attitudes of industry representatives toward secondary materials appear to vary considerably. One government representative who deals mainly with manufacturers, felt that all industrial consumers initially feel that secondary materials are no good because they are contaminated. (2) Donnan (1976), however, found that "All grades of waste paper are generally being recovered to the extent that it is economically feasible for the market participants to do so." (3) Gerson (1974) found that, "As a group, raw materials suppliers showed a most realistic and constructive attitude toward secondary plastics utilization," but that among the food, beverage, cosmetics and other consumer package goods manufacturers, "Many companies seemed unaware that their plastics waste had any value. More still felt that once a package had become wetted with product, or otherwise soiled, the only place for it was the garbage container." (4) This survey also found that about 57% of waste plastics from those industries taking part in the survey was recycled. Estimated metals recycling efficiencies in Canada run at 70 to 80 per cent for new scrap and approximately 20 to 40 per cent for old scrap, although there are no reliable figures available for the latter category. (5) More so than for any other industry, there has grown up a secondary industry in metals recycling and reprocessing. Gerson describes this industry as a scattering of independent, often part-time, collectors which feed 250 to 300 shrewd, independent dealer processors (in Canada) who survive largely by their knowledge of market fluctuations, selling to both primary processors and secondary smelters. There is no question that scrap is valuable in their eyes; it is their means of livelihood. Clean scrap is a standard component of primary production and mixed scrap is frequently used for alloy production.

Although it may be said that recycling occurs and, to varying degrees, is accepted in all major resource industries, a number of significant barriers to recycling have been identified by industry. Those most commonly mentioned are discussed here.

Marketing: Unstable markets and lack of research in product development and marketing were the barriers most frequently mentioned by industry interviewees in 1974. These perceptions are supported by findings and recommendations of both Donnan (1976) and Gerson (1974) who, in addition, point to the general lack of marketing data on secondary resources. Among Donnan's recommendations are included research to develop additional uses for waste paper, and the maintenance of more precise data on prices and quantities of waste paper. He concludes that, "... government efforts at expanding paper recycling should be directed at increasing the supplies of premium grades and the demand for bulk grades." (6) Gerson (1976) relates the vagaries of life as a secondary metals dealer, whose markets fluctuate over a price range of several hundred percentage points in response to virgin metals supply/demand ratios. These fluctuations may be the speculating dealer's way of making a living, but they do not lead to steady markets or strong incentives to expansion in the industry. In a 1976 study conducted for the Ontario Ministry of the Environment, consultants found that there was no co-ordinated, comprehensive marketing strategy in place for post-consumer products, and that a marketing program "must emphasize material quality, supply stability, price stability and flexibility in user alternatives." (7) On the question of material quality, Gerson (1974) has concluded that, "better utilization of plastics waste and scrap in the province would be assisted by the establishment of standard specifications, or at least commonly accepted descriptive terms for such materials."

It would appear, then, that industry representatives' views on marketing are substantially accurate. The natural question which follows is: what is industry doing about it? Conclusive information on this question was not found, but the significant level of concern about the lack of progress in secondary materials marketing and product development is indication enough that not much is being done. The studies cited all indicate a generally low level of marketing in secondary materials and products. This lack of aggressive interest on the part of industry is also reflected in their views of government involvement.

Industry-Government Co-ordination: A clear lack of consensus on the respective roles of government and industry in the development of technology, markets, new products and recovery plants is reflected in industry's perception of a major barrier to recycling at the industry-government interface. Views within the private sector are extremely varied, the problem being described as differently as: "lack of political co-ordination," "too much government involvement," "not enough government involvement," and "inconsistent government policy."

The previously cited Metropolitan Area Waste Management Study (1976) points out that "current (marketing) activities within the private sector are carried out virtually in isolation of government marketing programs," and that there is a mutual lack of understanding of each others' capabilities and role in marketing. (8)

Generally, secondary resource industry representatives favoured government research and subsidies for the industry, but sought less regulation (e.g. environmental standards) and guarantees that the public sector would not become directly involved in competition with them. Primary and manufacturing industry representatives tended to be more favourable to stronger government intervention. Also, private sector interviewees were more inclined to view resource recovery as the more viable approach to solid waste management when compared with waste reduction and product reuse. One of the most frequently mentioned irritants concerns regulated freight rates and tax incentives to primary producers, both of which are said to disadvantage the secondary materials industry. Gerson (1977) could find no unequivocal substantiation that freight rates discriminated against secondary materials, however, but does recommend careful consideration of fiscal and financial stimulants to "shift the scrap/waste equilibrium toward recycling" and away from increasing virgin materials utilization.

Education and Information: A third, frequently mentioned non-economic barrier to increased materials conservation was expressed as a need for more public education and information, to teach people the what, how and why of recycling. Donnan (1976) echoes this need in his recommendation that government provide information to consumers on recycled content and on products which are difficult to recycle. Gerson and the Science Council do not limit the need for education to the public, but point out that better educated and more informed purchasing officers, specification writers and designers in industry could significantly affect the recyclable content of many products, (9) and that recycling must be included as a subject for study in formal education curricula. Harvey and Marsden (1974) point out the failure on the part of all proponents of better education and information to make the connection between such a program and the need to control advertising and packaging which influence people in the opposite direction. (10)

In summary, distinctions among industry's attitudes toward recycling and reuse can be drawn at least among three groups: the secondary materials (recycling) industries, manufacturers of consumer package goods, and others. While as many other distinctions may be drawn as there are industries, these three are instructive from an overview perspective, because

they focus attention on differences reflected in practice (viz. recycling efficiencies) and on different views concerning the industry-government interface. The established recycling industry wants more assistance with less regulation from government. The mainstream of the manufacturing industry apparently has a positive attitude toward the use of new and old scrap, but little motivation to change the status quo towards increased use of secondary materials. Hence, the attitude that more and stronger government involvement is needed, if the objective of higher secondary materials usage is to be attained. Manufacturers of consumer package goods appear to be the industrial sector least concerned about materials recycling.

3.2 Retail

The retail industry merits discussion separate from the primary and secondary manufacturing industries partly because it has received so much attention in the course of the debate over milk and soft drink packaging, but also because it has received very little attention in all other product areas. In a recent article documenting the dispute between retailers and producers over returnable soft drink bottles, the president of the Canadian Federation of Retail Grocers is quoted as saying, "... it costs retailers between 40 and 50 cents to handle one case of empty returnable bottles." (11) The response reported from the Executive Director of the Ontario Soft Drink Association, representing soft drink producers, is that, "In our opinion, it is his (the retailer's) responsibility to cover the costs of the margin. Refillable bottles do not vary from the handling of other merchandise." Similarly, a study of factors affecting the use of refillable milk jugs found that "... the retailers perceive the jug to be the least preferable milk package..." mainly because of the extra costs of making refunds, storing and transporting jugs and accounting for jug pilferage. (12) The retailers' guess at these handling costs is one to four cents per jug, but no costing study has been conducted. A study into the entire soft drink distribution system, including an estimate of retail margins, has recently been commissioned by the Ontario Soft Drink Association. Preliminary results of the study were not made available.

Predictably, then, retailers sided with the Glass Container Council of Canada's position before the Solid Waste Task Force Beverage Packaging Working Group, which emphasized the economic dislocation that would result from banning non-returnables and supported recycling as the preferred alternative.

Two major barriers to recycling identified by a representative of the Retail Council of Canada were competition among manufacturers to continually produce new and varied packaging and public attitudes which were either not supportive of solid waste reduction or not being translated into appropriate action. (13) If, as we shall see later, public attitudes are in fact supportive of conservation practices, the question remains to what extent retailers might be in a position to influence behaviour patterns of shoppers which are consistent with this expressed attitude. For example, some retailers have recently taken it upon themselves to offer consumers generic, white label foods and the experiment has been quite successful.

Retailers are in the best position to judge consumer acceptance of products employing secondary materials, but no research in this area was uncovered. Finally, only very little documentation of the history, growth, volume of sales or nature of clientele of the second-hand, post-consumer retail industry was found. (14)

3.3 Labour

It is a common belief that labour organizations are unequivocally opposed to environmental pollution control, conservation and related programs on grounds that such programs jeopardize union members' jobs. Perhaps, the best example of such a position is that taken by the United Steelworkers who have consistently opposed legislation to ban non-refillable soft drink containers in Ontario on the basis that 1,700 jobs would be lost. The issue here, however, is clearly not one of loss of jobs per se, since analyses have shown that, while there would be a shift in the labour market away from steelworkers, there would also be an overall increase in the number of jobs. (15) The issue then is one of loss of jobs for steelworkers. Jacquelynne Mansell suggests two underlying motives for the Steelworkers' Union position: (16)

- i) to protect itself from a significant reduction in its membership, and
- ii) a genuine desire to protect workers against forces beyond their control, in the absence of any real voice in determining the manner in which a changeover in technology or mode of production would be achieved.

In an article in which he attempts to set forth common bases for labour, environmentalists and community groups, Robert Paehlke points out that while recycling and product durability standards are among those issues which are often perceived as important to environmentalists but threatening to labour, mutually acceptable approaches can be worked out if the true nature of the problem is recognized; "Presumably, it isn't the production of the container that is important, but rather the job, the seniority, the union and the location of the work." (17) Paehlke suggests that full employment policies would help bridge the gap, and so would programmes subsidized if necessary, designed to fill any sectoral void in the labour market created by conservationist legislation. Thus, programs guaranteeing stable and comparable jobs to steelworkers which could be implemented along with ban-the-can legislation would presumably defuse the Steelworkers' Union opposition.

There is clearly a basis for significant co-operation on environmental policy among environmentalists, labour groups and government in Ontario, for the scenario of the ban-the-can legislation depicted above is not typical of labour's approach in this province. At its 17th annual convention, November 1973, the Ontario Federation of Labour (O.F.L.) adopted a comprehensive statement of policy on environment, conservation, resource management and pollution control. Included in this statement are the following words:

"Not enough research has been done on the possibilities of productive uses of various kinds of waste, nor have programs of re-claiming and recycling been pursued with enough vigour."

"Of primary importance are the challenges posed by our cities. Solid waste, noise, air pollution, unplanned development, and transportation are some of the obvious areas of concern."

The statement sets out a program of action which includes, among other things, that the O.F.L. shall:

"Carry on an education program for our members and participate with other groups to mobilize public opinion against the dangers of pollution. Seek technical assistance from government, university and sympathetic industry research units. Renew our efforts in forming citizen Conservation and Pollution Control Committees. Identify local sources of pollution and make constructive criticism of area pollution problems."

"Demand and support effective municipal programs of solid waste management and a recovery system for throwaway products. Demand an immediate program to recycle containers and paper, recover metals, compost organic waste, use garbage as a source for power fuels."

"[Press] Government [to] provide incentives to manufacturers to make more durable and lasting goods and provide a tax disincentive on built-in obsolescence. Seek to decrease the influence of the market and of the advertising industry as determinants of what will be produced and consumed." (18)

In a review of the Ontario labour movement's activities on the environmental front, Mansell documents the involvement of labour in issues as varied as Lake Erie pollution, the MacKenzie Valley Pipeline, fluoridation of water supplies and logging in Provincial Parks. (19) In addition to these, one of the major links between labour and environment is the issue of occupational health and safety. Labour's activities in research and lobbying for workers' health in the plant inevitably contribute to the more general debate on environmental health and quality. This range of involvement in

environmental issues demonstrates that labour is prepared to take a comprehensive approach to environmental management which includes recognition of the issues of solid waste management and resource conservation.

As recently as February 1978, the O.F.L. reconfirmed its stand in favour of environmental protection and conservation even at the cost of some jobs, in a time of extremely high unemployment. (20) To carry through this commitment, however, requirements in the priority areas of worker health protection and job protection will have to be met. It is labour's position that they would be more involved with environmental issues and professional environmentalists, if these individuals and public interest groups would show more concern for the problems of the workplace, such as asbestos dust. Waste management and resource conservation are insufficient to form a basis for co-operative action with labour, so long as worker health and job protection are seen to go unheeded. Any partnership must be based on mutually acceptable policies on a wide range of environmental and social issues.

The position sometimes taken by industry as well as some unions that expensive pollution control and safety requirements will force plant closures and result in job losses is seen by most labour representatives as one way in which workers are blackmailed into accepting either poor environmental quality or unemployment. Here is where labour sees government's role to be one of implementing and enforcing tough environmental legislation while simultaneously developing programs to retrain or relocate workers and support plant conversion in affected industries. In this way, society as a whole, including industry and labour, would bear the cost of environmental programs.

3.4 The Role of Government

The 1974 study of attitudes toward solid waste recycling included interviews with two members of Provincial Parliament and eight senior provincial public servants. (21) There was a consensus expressed that more recycling was needed, and that major barriers to overcome were the lack of markets for recycled products, the lack of public understanding of the significance of the problem and the lack of political co-ordination among various levels of government. From their discussions with these and municipal and federal officials, the researchers concluded that: "The sharpest competition will come between the provincial and municipal authorities who are to a great extent in competition over the collection, funding and use of potential secondary materials." (p.49) This prognosis, however, is not borne out by a review of the more recent activities at various levels of government.

Municipal government involvement has focused on participation in separate collection of newspapers and glass. Provincial activity has centred around development of technology in resources recovery and marketing and economic policy research carried out by the Resource Recovery Branch and the Waste Management Advisory Board respectively. The Ontario Environmental Assessment Board has also played a role by increasing pressures to find alternatives to landfill through the rejection of some major landfill applications in recent years. (22) The Province has provided some educational and financial assistance to Ontario industry interested in making better use of wastes through the Ministry of Industry and Tourism and the Ontario Development Corporation. (23) The major federal government involvement to date has been the establishment of the Canadian Waste Materials Exchange under the aegis of the Department of Fisheries and Environment and the Ontario Research Foundation.

From this short list, a quite rational delineation of roles among different levels of government appears to be taking place. Municipal governments, in the front line of garbage collection and disposal, are adapting their services to accommodate resource reclamation needs. Provincial government in Ontario is carrying the major role of research and policy development and operation of pilot projects in support of municipal reclamation systems. The Province is also investigating policy options and operating pilot projects focusing on waste reduction and aimed directly at consumers and industry. The federal government is supporting research and co-ordination of programs with a national scope.

Considerable support for direct government involvement has already been reported. This support has come from a diversity of sectors including segments of the primary industry, the retail industry, the Ontario labour movement and the general public. Of course, they have not all been united on the form government involvement should take and these differences combined with strong opposition from some labour and industry groups have effectively dissuaded government, at least at the provincial level, from pursuing stronger conservation policies with respect to solid waste management. The best example of this is the difficulty the Ontario Government has had trying to phase out non-returnable soft drink containers, in spite of the demonstrated savings in solid waste and energy associated with such a move. (24) Also at the provincial level, evidence was found of lack of research co-ordination. (25) These examples suggest the need for a strong, centralized information research and policy development council at the provincial level, focusing on informing and educating the public about resource conservation and waste management, co-ordinating research at the provincial level and providing policy advice to government.

At the federal level, the major shortcoming observed is the woeful inadequacy of information on waste and scrap collected and published by Statistics Canada, "where this topic is understood to be the part-time responsibility of a single official." (26) Inquiries at Statistics Canada by this writer also yielded only vague references to an ongoing materials-energy balance study, with a report and workshop scheduled for spring 1979. There is "no consistent move to separate off recycled stream (data) from prime resources stream (data)." (27) It was suggested, however, that more pressure from provincial groups and agencies requiring such data could result in improved data collection and dissemination by Statistics Canada in this area.

3.5 General Public

A variety of surveys of the Ontario general public's attitudes towards and levels of awareness concerning solid waste management related issues were found, dating back to 1971. This provides a hint of perspective on any changes or trends which may have taken place over the past seven years. Common factors which could be traced through the different surveys are:

- level of knowledge of method, cost and problems of garbage disposal;
- level of knowledge of consumer or householder actions and available programs to reduce solid waste and conserve resources;
- willingness to participate in garbage separation or recycling activities in the home; and
- degree of participation in recycling activities.

According to a survey conducted by Brantford Pollution Probe in 1971, 31% of the city's population did not know how Brantford's garbage was disposed of, and 62% had no understanding of the term "recycling." Only 22% thought that non-returnable food and drink containers presented a problem. (28) In a pollution survey of Toronto, commissioned by the Toronto Recycling Action Committee (TRAC) two years later, 45% of respondents did not know by what method Toronto disposed of its garbage, and in a 1977 survey, over 50% of respondents in Toronto didn't know that landfill was one means of disposing of the city's garbage. (29) This latter study also found that 73% of the sample was unaware of problems associated with landfill, and just under 70% could not explain the difference between renewable and non-renewable resources. Also of significance is the finding in the 1973 survey that over 70% of the population had no realistic idea of the cost of garbage disposal. From these results, it would appear that the Toronto and vicinity public is largely ignorant on the subject of garbage disposal and resource conservation, and that this ignorance is not being dispelled judging by response consistency from 1973 to 1977.

The level of awareness of specific actions or programs available to the individual to reduce solid waste was only somewhat higher. In the 1973 study, two-thirds of respondents were aware of the city's weekly newspaper pickup, but only one-third participated in the program. In the 1977 study, by comparison, two-thirds of respondents actually participated in the newspaper collection program, two-thirds knew the location of a recycling depot, and

between one-fifth and one-third deposited their cans or bottles at the depot. It would not be correct to assume from these results a significant improvement in recycling participation rates (per cent of a sub-population taking part in the program) from 1973 to 1977, because of the considerable differences in survey design, purpose and sample of the two studies. It would appear, however, that awareness of curbside newspaper collection has improved at least somewhat. This conjecture is supported by the perception of a city official closely associated with the Department's Wednesday newspaper collection program. One may also say that participation rates in the less "convenient" programs (recycling depot) are very low, especially considering that the stated participation rates are for an area within two blocks of a depot site.

A 1976 study of factors affecting the use of refillable milk jugs came to the interesting conclusion that 82% of jug users cited "convenience" as the main reason for preferring jugs, while 42% of pitcher-pack users gave the same reason. (30) Very few of either group cited price differences as the reason and almost half were unaware of the price differential.

Of the 49% of respondents in the 1973 study, who usually purchased cans or non-returnable bottles, 27% gave "convenience" factors as the main reason. "Availability" was the only reason more frequently cited. Convenience to the public, then, is an important factor in determining the success of any program, whether it be aimed at type of container purchased or method of waste disposal.

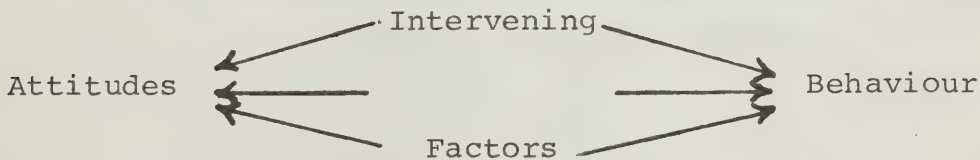
The behaviour described in the above statistics is not, however, indicative of people's attitudes toward reuse, recycling and conservation in general. In 1971, 75% of Brantford residents sampled stated they were willing to separate their garbage in the home. In Toronto in 1973, 63% of the sample said they would definitely participate in the special newspaper pickup, and 61% said they would take part in voluntary wet/dry garbage separation. In the 1977 survey of Toronto residents, some 80% of those sampled said they would be "willing to pay a deposit and take back empty refillable containers if their use were extended to other foods or beverages."

Support for more government action in waste reduction and recycling were reported in both a 1972 (U.S.) and the 1973 (Toronto) surveys. (31) The Toronto survey found that those with more education and younger people were more likely to support strong government action, suggesting increasing acceptability of government intervention as education levels rise over the next two decades.

3.6 The Theory of Attitudes - a Summary

From these findings, it is apparent that among the general public, there is a clear discrepancy between attitude and behaviour. Similar findings were reported in the survey of 1,281 housewives from 68 U.S. cities in 1972. While housewives felt that recycling is a necessary step in which they can help and most said they were willing to separate their household trash, "... few housewives have taken any direct action in the past..." Nevertheless, attitudes are important indicators of potential behaviour, given supportive conditions. To come to grips with what these conditions may be, it is helpful to think of the relationship between attitudes and behaviour as shown in Figure 1.a. If the intervening factors can be identified, the likelihood of being able to translate attitudes into behaviour increases dramatically.

Figure 1.a. Relationship of Attitudes to Behaviour

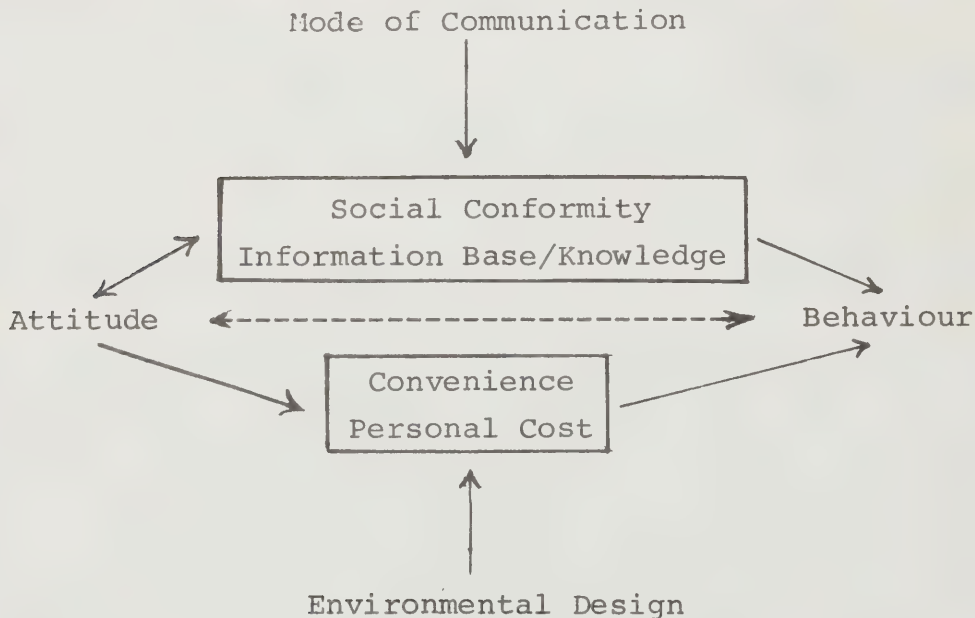


One such intervening factor, "convenience" has already been identified in the research reported on above. In a review of the experience of other campaigns aimed at attitude and behaviour change, Middleton and Associates were able to identify four program components influential in determining attitude and behaviour changes: the agent of change, the mode of communication, personal cost involved and the knowledge or information base of the individual. (32) Of course, the characteristics or nature of the pre-existing attitudes and behaviour are also important, but these have already been at least somewhat defined. Agents of change documented by Middleton in decreasing order of effectiveness are: group conformity and social pressure; environmental design; reward, penalty or model imitation; and rational argument. The similarity of the agent of change and program component lists is obvious, "penalty/reward" being very similar to "personal cost," and "information base" being closely related to "rational argument." "Mode of communication" is clearly not an intervening factor, being rather an external factor acting upon "information base," and to some extent upon "social conformity." "Environmental design" is also an external factor acting to determine "convenience" and frequently "cost." We are left, then, with the following intervening factors determining the degree of consistency between attitude and behaviour:

- social conformity
- convenience
- personal cost
- information base/knowledge.

The substantive content of information and the way in which it is communicated affect the information base and may also affect the intervening factor "social conformity." For example, the current Ontario Hydro campaign to encourage consumers to save electricity uses the slogan: "Don't be a turn-off," to convey the social unacceptability of leaving lights and appliances on when not in use. The environmental design of a solid waste management program could include anything from the type of collection system to the design of product packaging. At all stages, environmental design will have a direct bearing on cost, and frequently will determine the convenience to the consumer of the desired behaviour. Taking into account these external factors, Figure 1.b presents a more detailed picture of the relationship between attitudes and behaviour.

Figure 1.b Relationship of Attitudes to Behaviour



It is worth noting that the Mode of Communication can serve to modify both behaviour and attitude because of the symbiotic relationship between attitudes and social conformity and information base. Environmental design is much more likely to affect behaviour directly; however, behavioural change may in turn also effect a change in attitude.

Optimization of any one of these intervening factors is no guarantee that attitude-behaviour consistency will result. The converse is more likely to be true that if any one of the intervening factors is misaligned with attitude-consistent behaviour, such behaviour is unlikely. While it is difficult to rank these intervening factors in order of importance, evidence suggests that social conformity is the most powerful among them. Few individuals are prepared to engage in non-conformist behaviour for which they may

be chastised by peers or society at large. Energy conservation and anti-drug abuse campaigns have demonstrated the effective use of the social conformity approach to behaviour modification.

Information programs communicate substantive facts, but often also convey normative or value statements intended to influence the receivers' perceptions of what is good, modern, acceptable, etc. There is, thus, a critical link between the intervening factors, "information" and "social conformity." The theory of attitude change suggests that to develop effective information programs, various levels of public must be identified and information output differentiated according to intended recipient.⁽³³⁾ Community leaders, if they are to be expected to promote conservation programs, will require in-depth scientific knowledge about solid waste disposal, its costs, quantities and problems. The public at large, which is required only to change its disposal behaviour somewhat, is more likely to respond to short, repetitive and normative messages.

It is obvious that success of a program is more likely if the environmental parameters can be arranged so as to fit into individuals' established patterns of behaviour, while still achieving the intended objectives. Thus, curbside pickup programs have a higher participation rate than recycling depot programs, because of more convenient or better environmental design. Similarly, good product or packaging design which makes separation easier (more convenient) encourages recycling.

Cost factors sometimes appear immutable, but it is often a matter of how they are presented. For example, integration of waste disposal costs into pricing so that disposal cost is reflected in the price per unit product would automatically encourage consumption of products with low waste components. Also, prominent display of refund values of returnable containers, allowing the consumer to see the comparative cost savings on a product in returnables, presents the cost factor associated with recycling in a positive light.

Notes to Section 3

1. Harvey, E. B. and Marsden, L. R. (1974); Municipal Solid Waste Recycling; Attitudes of 50 Key Individuals, Pollution Probe
2. Personal communication with P. Provias, Market Development Engineer, Resource Recovery Branch, Ministry of the Environment
3. Donnan, J. (1976) Paper Recycling in Ontario; Ministry of the Environment
4. Gerson, F. T. (1974) Preliminary Survey of Waste and Scrap Plastics in the Province of Ontario
5. Gerson, F. T. (1977) Materials Recycling, History, Status, Potential; Science Council of Canada, p. 39
6. *ibid.*, p.3
7. MacLaren, J. F. and Dillon, M. M. (1976); Metropolitan Area Waste Management Study; Ontario Ministry of the Environment
8. *ibid.*, p.45
9. Gerson (1974) and Science Council of Canada (1977); Canada as a Conserver Society, Report no. 27
10. *ibid.*
11. Keddy, Barbara (Nov. 1977); "Retailers Dislike Costly Chore of Returning Empty Pop Bottles" *Globe & Mail*, Toronto
12. Peter Middleton and Associates (1976); Factors Affecting the Use of the Refillable Milk Jug in Ontario
13. Solid Waste Task Force, General Report, Volume I, 1974
14. Carter, Joyce (May 25, 1978) "Tramping After Annie," *Globe & Mail*, p. T1. Later sections of this report provide some additional information on second-hand shops
15. Solid Waste Task Force, General Report, Volume II, 1974
16. Mansell, Jacquelynne (1977); "Forum: Labour and the Ontario Environment," Alternatives, Vol. 6, no. 4

17. Paehlke, R. C. (1977); "Forum: Labour, Environment and Community, 12 Ways to Start Working Together," Alternatives, Vol. 6, no. 3
18. Ontario Federation of Labour, "Statement on Environment, Conservation, Resource Management and Pollution Control," 17th Annual Convention, November 1973
19. *ibid.*, 1977
20. See: Notes for a Panel Presentation by John Eleen, Director of Research, O.F.L., C.L.C. Conference on Jobs and the Environment, Ottawa, Feb. 19 - 21, 1978

Also see: Kit Collins, "Firms Say Pollution Codes Too Costly" *Ottawa Citizen*, Feb. 20, 1978
21. *ibid.*, Harvey and Marsden, 1974
22. Most notably, the rejection of the Maple site for Toronto's garbage in 1978
23. See James F. MacLaren's and M. M. Dillon's joint study: Metropolitan Area Waste Management Study, 1976, Ontario Ministry of the Environment
24. *ibid.*, p. 88, Solid Waste Task Force
25. The study area for a pilot program of solid waste separation in the household with municipal separate collection was superimposed on the study area of an ongoing program to assess the effects of and participation in home composting.
26. *ibid.*, Gerson, F. T. (1977), p. 34
27. Personal conversation with Statistics Canada official
28. Attwater, Clive et al; "Probe Recycling Project," October 1971. Available from Pollution Probe.
29. Toronto Recycling Action Committee: "Pollution Survey City of Toronto, October - November 1973" conducted by Canadian Inter-mark

D. S. Wright, "Interim Report to the Waste Management Advisory Board on Phase I of the Home Composting Pilot Project," January 1978
30. *ibid.*, Middleton and Associates, 1976
31. National Analysts Inc. (1972), "Metropolitan Housewives Attitudes Toward Solid Waste Disposal," study conducted for the Environmental Protection Agency

32. Peter Middleton and Associates (1975); "Materials Flow Through the Household and Reduction of Domestic Solid Waste," study conducted for the Office of Energy Conservation
33. Sources upon which the discussion of attitudes and behaviour change are based include:
 - (i) James Best (1973), Public Opinion, Micro and Macro, Dorsey Press, Illinois
 - (ii) King, Bert and Elliot McGinnies (1972) Attitudes, Conflict and Social Change, Academic Press, N.Y.
 - (iii) Lowenthal, D. (1966), "Assumptions Behind the Public Attitudes," in H. Jarrett (ed), Environmental Quality in a Growing Economy, Resources for the Future Inc., Johns Hopkins Press, Baltimore

4.0 SOME NEWLY FOUND ATTITUDES

The preceding review profiles attitudes culled from many different studies over the past five years, only a few of which directly probed the attitudes of industry, government and labour representatives and householders.⁽¹⁾ Markedly lacking from this list are retailers of both new and used or post-consumer products.⁽²⁾ The retailer is a natural focal point for the discussion of concepts such as product specifications and durability, which are closely related to materials recycling, for it is through the retailer that the consumer and manufacturer meet to strike their bargain. In today's sophisticated markets, the retailer plays the critical role of interpreting demand within certain constraints of supply. Retailers' views as to opportunities for increased materials recycling, and their likelihood of success, as well as their knowledge about existing trends in consumer preferences and patterns, have a unique contribution to make in determining paths in the direction of greater conservation.

One insight into recycling and attendant psychologies may be gleaned from those individuals who have made their living by it, in some cases since 1914: the post-consumer product retailer. Merchandise handled by these businessmen/women is as diverse as clothing, glassware and major appliances, for almost all items not excluded for personal hygiene reasons can be purchased 'used'. In addition, a small industry has recently sprung up engaged in the manufacture of new styles of fashion clothing made entirely from old, reworked textiles. What is the nature of these markets? How have they changed or developed? What are the major problems encountered in such businesses? These are all questions germane to any policy attempting to promote materials recycling.

4.1 Post-Consumer Product Shoppers

In an effort to answer some of the above questions, and to document the missing attitudes, one street survey and two rounds of more in-depth interviews were conducted. The survey sampled 86 shoppers at 12 post-consumer product retail outlets in Toronto as to frequency of shopping, advantages and disadvantages of shopping at post-consumer stores, perceived demand for more such shops, education, income and age. The questionnaire is presented in Appendix I. Frequency distributions for all questions and some cross-tabulations are presented in Appendix II.

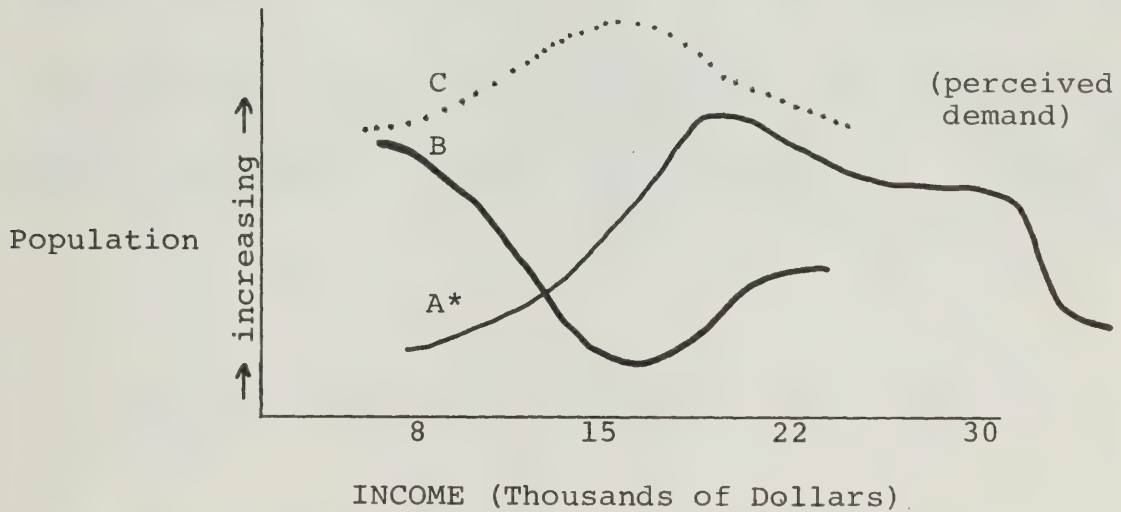
Almost one-third of shoppers sampled (32% according to question 1a and 29% according to question 1b) had shopped at that particular outlet for the first time and a similar number had shopped there fewer than six times in the past year. First-time and low return shoppers constituted a higher percentage at fashion outlets (64%) than at utilitarian outlets (50%). Conversely, 25% of shoppers at utilitarian outlets had shopped there twenty times or more in the past year, compared to only 11% at fashion outlets. This suggests a higher rate of market growth for those shops in the fashion outlet category, than for utilitarian outlets. The former category of outlets also tended to be located in prime, high quality shopping districts in comparison with utilitarian outlets. Fifty-five percent (55%) of all shoppers sampled indicated that they do shop at other second hand stores, most frequently at the Goodwill and Salvation Army outlets which have served the community for many years.

The predominant reason by far why people shop at second-hand stores is to save money (mentioned by 76%); although fully 60% said they shop there to "get what they want". Indeed, many items are simply not available elsewhere, such as the "Annie Hall" fashions. Only 12% were at all motivated by environmental considerations. Surprisingly, there was no significant difference in reasons given for shopping at second hand stores between utilitarian outlet shoppers and fashion outlet shoppers. There was also considerable agreement about the disadvantages of shopping at these stores, the need for cleaning and repair, lack of guarantee and poor selection being most often mentioned. The need for cleaning was most frequently mentioned at utilitarian outlets, and the lack of a guarantee was a major concern at heavy appliance outlets.

The post-consumer product shopper is most likely to have a high school education or better, be part of a family with an income less than \$8,000. per year and be between the ages of 18 and 40. However, some 20% of shoppers who answered the income question indicated a family income greater than \$22,000! Also, there are some significant differences separating fashion outlet shoppers from utilitarian outlet shoppers. The former are much more likely to be under 25 (56% vs. 13%), while the latter are much more likely to have at least some post-secondary education (54% vs. 36%). The data suggest that a great number of the fashion outlet shoppers are recent high school graduates, some of whom may still be in school or living at home.

Also of interest is the distribution of income over the sample population which, as illustrated in Figure 2, is the inverse of the income distribution for the larger population.

FIGURE 2: SCHEMATIC COMPARISON OF INCOME DISTRIBUTIONS FOR SAMPLE POPULATION AND GENERAL POPULATION



*Line A is a graphic representation of Family Income Distribution for Ontario Metropolitan Areas, taken from Statistics Canada, Income Distributions by Size in Canada: 1976, 13-207, and updated to 1978 using a 16.5% increase factor calculated from changes in the Consumer Price Index and Ontario Average Weekly Wages and Salaries.

Line A represents the normal income distribution for Ontario urban populations and line B the income distribution for our sample population. The unexpected aspect of curve B is the rise in its tail at the higher income end. These shoppers do not shop at second-hand stores strictly because of economic need. High-income shoppers are equally represented in both the utilitarian and the fashion categories, which suggests that the fashion exclusive to second-hand stores is also not the attraction. This finding bears out the comments made by several operators of these stores (see following section), that an increasing proportion of their clientele consists of well-to-do, often professional people who are simply interested in buying quality merchandise at reasonable prices.

Curve 'C' in Figure 2 illustrates the relationship of income to perceived demand for additional post consumer product stores. A high percentage (68%) of respondents felt there was a demand for more stores of this kind (question 5), and interestingly, the middle-income groups who are relatively under-represented in the sample were the groups most likely to perceive this demand. While this suggests a potential for an expanding market, particularly among families in the \$8,000 to \$22,000 income range, this conclusion must be qualified by the fact that the sample consisted of current patrons only and was not randomized.

In summary, second-hand shops are frequented by young and old alike, depending somewhat on the type of store. Most clients are well educated, and while financial considerations are the primary reason for shopping there, they are not the only reason. There appears to be at least some scope for expanding the post-consumer product market.

4.2 Retailers: Post-Consumer Products

The first round of in-depth interviews sampled 11 Toronto operators of post-consumer product retail outlets. The interview schedule used is presented in Appendix III. The types of operations included in the sample varied from department store (Ex Toggery, Goodwill Warehouse) to reconditioned specialty shops (Frankel Clothing, Adamson Appliances) and fashionable remanufactured goods (Amelia Earhardt, Flying Down to Rio). Three of the outlets fall into the "fashionable" or "trendy" category, the other eight being more utilitarian oriented, including three outlets operated by social service organizations. The "trendy" shops specialize mainly in the Annie Hall fashion and use old clothing and textiles for remanufacture, or specialize in old stock from the 1940's and 1950's. The "fashionable" shop carries mainly used high quality clothing of current style and presents these in a boutique setting. Items are repaired, but no remanufacture is involved. Although these categorizations are somewhat arbitrary, they are considered important because of the very different history and clientele associated with each and are, in fact, an outgrowth of the research, not an 'a priori' design consideration. Interviewees were selected with a view to maximizing geographical distribution and type of product carried. A list of shops sampled by category type illustrates these criteria:

<u>Fashion Shops</u>	<u>General Location</u>
Second Nature Boutique	North Toronto
Amelia Earhardt	Yorkville
Flying Down to Rio	Yorkville
<u>Utilitarian Shops</u>	
J.W. Appliances	Queen St. W.
Queen City Appliances	Queen St. W.
Adamson Used Furniture & Appliances	Queen St. W.
Goodwill Warehouse Outlet	King St. W.
Frankel's Clothing Exchange	Downtown Core
Ex Toggery	North Toronto
Junior League Opportunity Shop	North Toronto
Big Sister Thrift Shop	North Toronto

The sample also turned out to have a wide range of historical business experience, the oldest business sampled having been established in 1914, and another in 1928. Altogether, six of the businesses sampled have been in operation since 1969 or earlier, and five since 1970 or later. All 'fashion' shops in the sample began their operation after 1970.

Reasons given for getting into the business of retailing post-consumer products varied only slightly. Service organizations (3) cited a two-fold objective; to provide employment (although many use primarily volunteer workers) and to provide a service to the poor. Private entrepreneurs (8) all gave the profit motive as their main reason, seeing their response to consumer demand as a means of making money. Only one manageress of a fashionable Yorkville shop identified recycling as at least a secondary objective of her business. Although all respondents indicated in one way or another that their business was meeting an identifiable consumer need, none had ever carried out any systematic market research to document that need. All the more recent initiatives resulted either from a response to "gut feeling" or as an outgrowth of related personal experience; for example, an appliance serviceman also handling used appliances or a seamstress branching out into the remanufacture of used textiles. Older businesses also frequently started up in response to the same social service need that the service organization outlets aim to meet, because at the time of their inauguration there were fewer or no social welfare services offered by the state.

When asked whether the market for their products was expanding, steady or contracting, six respondents felt it was expanding, four felt it was steady and one replied "contracting". This latter respondent, a used appliance repairman and retailer, felt this market contraction resulted from the general recession in the economy which meant that people were buying less of everything. The recession and inflation were also given as reasons for post-consumer market expansion by other respondents. These individuals felt that a change in public attitudes more favourable towards recycled and reused goods was complemented by a greater concern among consumers about value (style, durability and price) resulting partly from their decreasing purchasing power in a time of recession. The new Annie Hall fashion trend was also cited as one reason for the market expansion. Market growth is one important variable where a difference is observed between fashion and utilitarian outlets. All operators of fashion outlets reported an expanding market compared to only 37½% of utilitarian outlet operators. Fifty per cent of this latter group reported a steady market.

There was also some difference in the market descriptions given by operators of fashion and utilitarian outlets. Clients of utilitarian outlets were unanimously described as more likely to be poor and often immigrants, with a gradual trend toward the younger and less impoverished shopper. In the used appliance business, purchases for cottages or rental units are reportedly common. Clients of fashion outlets, however, were described as younger and more middle class, with a trend towards more mainstream shoppers, and an increasing number of first-time shoppers. Both utilitarian and fashion operators recognized that their clients were looking for good quality merchandise at low prices.

In summary, the market description given by operators of post-consumer outlets bears out the results of the survey reported in the previous section. Although economic need is still the major determinant of post-consumer shop clientele, there is a trend towards market diversification, led by fashion clothing outlets which are experiencing the greatest market expansion. Post-consumer outlets carrying general goods and appliances are in a stable market situation.

Post-consumer store operators' perceptions of the public's attitude toward their products was also probed (question 6), and was found to vary according to type of product handled. Fashion outlet operators all reported an increasing public acceptance of used and recycled goods, frequently relating this to the image of their shops which they try to present, an image of fashion, good quality and good value which is competitive with virgin production and operates side by side with it in the same shopping districts. Consistent with its younger clientele reported in section 2.1, this group of entrepreneurs felt there was a lesser degree of acceptance of their goods among the "older generation." In direct contrast, used appliance operators feel the public's attitude toward their products is poor, primarily because of the low quality of service available and the incidence of "fly-by-night" operators which give the business a bad reputation. General goods (department stores) outlet operators reported a good public attitude with acceptability of their products improving. Public attitudes were considered a barrier to expansion of business by only three of eleven respondents.

There is only little consensus or patterning discernible in the responses to question 7, which attempted to ascertain respondents' perceptions of the degree of market influence wielded by each of the media, advertising, manufacturers, retailers and government. The data suggest, however, that operators of utilitarian outlets ascribe greater market control to media and advertising, than to manufacturing, retail or government sectors. Retailers' influence was generally rated lowest, and government influence was related to price impacts of taxation policies. Relatively speaking, fashion outlet operators felt retailers to have a much greater influence upon the market, exceeding that of all other sectors mentioned. This undoubtedly reflects the strong sense of personal responsibility, control and entrepreneurship exhibited by these operators.

Questions about supply sources again received varied responses depending upon the product concerned, some operators expressing concern about the increasing difficulty of maintaining an adequate inventory, others reporting no such difficulties at all. A major and frequently sole source of supply for all outlets surveyed was donations and consignments from individuals. Comments received indicate that supply shifts related to this source tended to favour the better quality outlets selling items on consignment, to the detriment of donations to outlets operated by service organizations. In other words, people are selling more and giving away less, a trend reflected

also by the strong growth of yard sales and garage sales in recent years.

Two additional significant sources of supply were revealed; rag dealers and major appliance retailers. Rag dealers are the main supplier of textiles to post-consumer fashion outlets who remanufacture these textiles into a wide variety of imaginative products. Two problems related to this supply have plagued these operators: they are often refused direct access by rag dealers, receiving only those materials selected to be sold by the dealer, and federal regulations prohibit the import of post-consumer textiles. In the product area of appliances, a few reconditioned appliance dealers have contract arrangements with large retailers (primarily Eaton's and Simpsons) to receive all the replacement appliances which are returned to the warehouse by the company drivers. These units represent a considerable proportion of the available used appliance supply, and when coupled with the generally low turnover of major appliances, this practice results in supply shortages for those dealers with no access to major retailers. From an industry perspective, however, this is probably an advantage, insofar as it lends stability to several larger, post-consumer outlets, thereby counteracting the reported fly-by-night reputation still associated with this business.

Two other barriers to expansion of the post-consumer retail industry were identified. High overhead costs and comparatively low profit margins make it difficult for operators attempting to present high style and quality merchandise competitive with the virgin product retailers, and also for the service organizations who generally carry lower quality inventories but sell these at the cheapest possible prices since their objective is to assist the poor and not to turn a profit. The imposition of provincial sales tax was also noted as a barrier, particularly by appliance retailers, in whose experience the public is extremely loath to pay sales tax on used goods. More than once was a story related about how a potential customer stopped all further discussion of a purchase upon learning that sales tax is payable even on used goods.

4.3 Retailers: New Products

The second round of in-depth interviews consisted of one informal and seven formal (more structured) discussions with executives or proprietors of furniture and heavy appliance retail outlets in Toronto.⁽³⁾ The interview schedule included the following topics: ranking of national and environmental problems, product selection criteria, effect on product of recycled content, consumer and retailer acceptance of recycled content, consumer and retailer acceptance of increased product durability, existing barriers to increased recycled content and product durability; relationship of new retailers to post-consumer retailers, market influence of media, advertising, manufacturers, retailers and government. The target group (furniture and appliance retailers) was selected for its manageable size and high level of competitiveness. A full range of operator sizes from large department stores to small, specialized service outlets was sampled. Appendix IV presents the sample list and interview schedule.

Respondents demonstrated a high degree of concern for the problem of resource depletion, ranking it equal to economic recession and most severe among six choices. Ranking of problems was as follows:

<u>Problem</u>	<u>Ranking*</u>
Resource Depletion	1
Economic Recession	1
Environmental Degradation (pollution)	3
Increased Crime & Violence	4
Racial Discrimination	5
Threat of War	6

(*Ranking based on mean rank values)

The following rankings are based on question 2 responses:

<u>Environmental Concern</u>	<u>Ranking*</u>
Air Pollution	1
Water Pollution	2
Solid Waste (garbage)	3
Noise Pollution	4

(*Ranking based on mean rank values)

Concern for resource depletion is apparently not translated into concern for reduction of the solid waste stream and the associated resource savings, insofar as other components of environmental degradation are ranked as more severe problems here than solid waste (in general) in question 1. This

suggests a need for better education of retailers as to the varied resource savings associated with recycling and good solid waste management.

All respondents felt that their company has a role to play in the solutions to environmental and resource problems. All furniture retailers indicated that they bundle boxboard and packing paper for recycling, but one respondent felt there should be more separation of waste framing and wood chip materials for recycling. Another respondent uses an advance calling system to ensure customers are home to receive delivery, thereby avoiding callbacks and energy waste. Appliance dealers cited participation in the federal government's ENERGUIDE program, and one large retailer emphasized his company relays information back to the manufacturer as to ways in which materials recycling of appliance components could be improved. Only the largest retailers (department stores) maintain a research and quality control function and handle the large volume of merchandise which provide the influence and knowledge to affect product specifications at the manufacturing level. Production improvements resulting from this process are quickly adopted by other manufacturers to maintain competitiveness. A co-operative association through which smaller retailers' experience and suggestions could be funnelled to manufacturers could be a useful extension of this mechanism. This function is apparently not met by existing retailer associations. Obstacles to solving resource depletion and environmental problems identified by retailers included the businessman's motivation to maximize profits, and consumer preferences. These are reflected in the product selection criteria enunciated by retailers.

When asked on what basis products which they stock were selected, most appliance dealers mentioned "quality" which probing determined to be composed of a combination of durability, service and warranty associated with a product. Mentioned less frequently as components determining demand for a product were appearance or style. The larger appliance dealers determine demand through marketing studies and monthly sales audits, while quality is assessed on the basis of product failure rates. Smaller operators rely on their experience of the service record of a manufacturer and the history of the product. In contrast, furniture dealers unanimously emphasized price and appearance as the most important determinants of demand for a product. Stocking a full range of product styles and prices is considered important. A small specialty operator noted that styling and price were the major selection determinants, even among his relatively upper class clientele, and that "people don't care about durability or quality." Only one interviewee indicated that his company (a large department store) set product specifications for manufacturers to meet based on laboratory testing and sent quality control engineers to visit manufacturers' plants.

Five of the eight interviewees were aware of products they carried containing recycled materials and were able to identify the components and products concerned. All but one felt that recycled content does not affect product quality, but many felt that it does affect the public's perception of the product, particularly in furniture. According to these individuals, shoppers expect recycled content should be reflected in a lower product price. By way of extension of these views, all interviewees felt that greater use should be made of recycled materials in the production of furniture and appliances, although better data are needed on exactly how much material is now being recycled.⁽⁴⁾ However, most retailers were not willing to give greater prominence to the recycled content of products because "it's not a selling point with the public." Thus, none of these respondents felt the public would react favourably to better labelling of recycled content, partly because of a lack of understanding of the need for recycling, but primarily because there is no personal benefit associated with recycled-content products such as with energy conserving appliances.

Low public concern and high costs of sorting and collection associated with recycling were the main barriers to recycling identified by these retailers. Government education programs, incentives to manufacturers and policies to ensure a visible benefit to the consumer from savings accruing from recycling were indicated as the means to overcome barriers and increase recycling.

Respondents were also questioned about their views on product durability (question 8). A majority (75%) of appliance dealers interviewed felt greater emphasis should be placed on product durability. Stevenson and Kellogg (1977) estimate an appliance's lifetime to be approximately fifteen years, but state that comments from appliance rebuilders indicate a decline in the durability of major appliances over the past five years. Nevertheless, they conclude that government action to increase appliance durability is not warranted for the following reasons:

- only a small fraction of the nation's resources and energy are involved;
- there is no proof that increased durability will be reflected in longer retention by consumers, and that a favourable energy balance is associated with increased durability;
- consumers are unlikely to pay extra for additional durability because of the low present value of an added year's use, ten years in the future; and
- the great difficulty in monitoring durability in relatively long-life products.

Retailers we interviewed, however, all felt that consumers would pay for increased product durability, especially if this longer life were reflected in the warranty. If this is indeed the case, then the "reasons" stated above lead to the conclusion that more research and information is needed as to the effects of increased product durability, not that action is unwarranted. Even if appliances are not among the larger resource consumption and waste generator products, 1% of Canadian materials and energy totals and 0.5% of national landfill by weight (5) are not insignificant levels by any means, and suggest that action to increase appliance durability and proportion recycled may indeed be warranted.

While furniture dealers agreed with their counterparts in appliances that consumers would be willing to pay more for increased durability, they placed far less emphasis on this aspect and felt that enough was being done today to ensure sufficient product durability. The difference in emphasis is foreshadowed by the difference in product selection criteria applied by retailers, as previously reported. There is a far greater emphasis on appearance or style in furniture than in appliances. As a result, only appliance dealers indicated a practice of promoting products partly on the basis of durability and a willingness to continue to do so.

Aside from price factors and the fashion-status orientation of consumer purchasing patterns, barriers to increased product durability which were identified by retailers included technology and economic impact on the industry. It was noted that new technologies often lead to obsolescence of earlier models, even though these may be still quite functional; the development of frost-free freezers and new synthetic materials exemplify these technological impacts. The use of new technologies in manufacturing, such as solid state electronic control mechanisms, increase efficiency but frequently also decrease quality control and workmanship. There may also be an economic disincentive associated with increased product durability. Longer product life means lower product turnover which some interviewees interpreted as being bad for business. Others argued that a lower volume of business will lead to less work and imperil many jobs. This need not necessarily be the case, however, as was pointed out by one large retailer who had given the matter considerable thought. He argued that retailers would price their products in such a manner as to turn the required profits in any circumstances, and lower volume would mean somewhat higher retail mark-ups per unit of merchandise. Also, increasing product quality would require some increase in labour or skill input per unit and would, therefore, not necessarily result in fewer jobs due to lower volume. Careful analysis of the relationship between product life and labour requirements is needed.

One unavoidable conclusion from these comments is that increasing product life will in most cases be reflected in a higher product price. Furthermore, gains in durability will not be made unless they offer a distinct competitive advantage to the manufacturer implementing them, in which case his example will soon be followed by others. In economic language, units of increased product life with marginal valuations less than the associated increase in product price, will not be realized without either government regulation, or incentives to increase the ratio of marginal valuation to price increase above 1.0. This relationship may be expressed as follows: $MV_C(\Delta Q) \geq \Delta P$

where: MV_C = consumers' marginal valuation

ΔQ = change in product quality

ΔP = change in product price.

Thus, the consumers' marginal valuation of a change in product quality must always be greater than or equal to the change in product price in order for ΔQ to take place.

Suggestions to increase product life included better information dissemination on product care and maintenance, and on tangible benefits of longer product life (e.g., cost per year of use). However, it was also suggested that consumers DO NOT WANT to buy just one furniture suite in their lifetime, but would rather purchase several to satisfy their desire for a change, and to "stay in fashion." This suggests that increasing recycling of furniture, particularly upholstery, may be more fruitful than increasing product life. Also, second-life marketing of upholstered furniture is problematic because of associated hygiene problems. This is less true of non-upholstered furniture, where longer product life and second-life marketing may result in a substantial reduction of materials consumption.

Further barriers to recycling furniture were identified in retailers' home delivery practices. Although appliance dealers said they prefer not to pick up customers' old stock when delivering new appliances, they indicated that they would do so if asked. The main objection to doing so was economic, as pick up of old appliances significantly slows down drivers' progress. Furniture dealers, in contrast, said they would not pick up old pieces which customers were replacing with their products, because of contamination problems as well as the unprofitable nature of such an operation. Space availability for storage, of course, is a factor determining whether post-consumer product backhaul is even a possibility for retailers, and was mentioned as a barrier by small operators who do not maintain large inventory warehouses.

All retailers interviewed were aware of second-hand operators in their product lines, and did not consider these as competition for their business. Appliance dealers were willing to act as suppliers for these operators, furniture dealers were not, with the limitations and for the reasons already noted. It was suggested, however, that independent cartage firms may be interested in adopting this role of collector and central supplier of used heavy appliances and furniture.

When asked about their perception of others' attitudes toward resource conservation as reflected in concern with recycling and extended product life, appliance retailers rated their consumers as being generally more concerned than their suppliers (manufacturers), and younger consumers as more concerned than older ones. These ratings were reversed by furniture retailers, who felt manufacturers were more concerned with these issues than consumers. This latter rating no doubt reflects these retailers' perception of the importance of fashion or style in the consumer purchase criteria. These findings suggest differential foci for action to promote resources conservation according to product type, and correspondingly different approaches. They also raise the question, why is durability and recyclability apparently of greater import to consumers in one product line than another? In seeking the answer to this, it may be useful to determine the relative influence of various marketing agents upon consumer choice. Status values of products will undoubtedly also prove to be an important component affecting consumer selection criteria.

When we asked retailers what influence they thought the media, advertising, manufacturers, retailers and government had upon consumer choice, they rated all as having equal influence except government, which was rated lower. On a scale from zero to five, where zero was considered as very high influence and five as very low, median influence ratings were 2.0 for all sectors except government, which received a 4.0 median rating. A more extensive survey of consumers as well as retailers on this question, and over a range of products may prove more illuminating.

Notes to Section 4

1. Harvey and Marsden (1974); Middleton & Associates (1976); National Analysts Inc. (1972); A. H. Water (1971); Toronto Recycling Action Committee (1973); D. S. Wright, Waste Management Advisory Board (1978).
2. "Used" products are here defined as products being marketed in their original form with only needed repair and cleaning added. Post-consumer products include also remanufactured goods made from 100% recycled materials.
3. In the informal interview, respondent's time constraints precluded use of the interview schedule. A discussion over lunch was substituted.
4. The only literature found relating to specific products is a report by Stevenson & Kellogg Ltd., titled Major Domestic Appliances and Automobile Tires: Environmental and Economic Impacts of Product Durability, 1977. This report estimates that 30% of appliances are ultimately recycled and 70% are dumped and concludes that the cost of collection is one of the main problems in achieving a higher proportion of materials recovery from appliances.
5. Stevenson & Kellogg, 1977

INTERVIEW SCHEDULEPOST-CONSUMER PRODUCT
CONSUMERS

Interview No.: _____

DATE: _____

TIME: _____

PLACE: _____

INTRODUCTION:

Hello, I'm..... from EiS, a consulting research firm. We're conducting some research into consumer attitudes and would like to ask you a few short questions. This will only take a moment, and your replies will remain strictly confidential.

1. a) Is this the first time you have shopped here?

Yes _____ No _____

b) How many times have you shopped here in the past year?

2. a) Do you shop at other second-hand stores?

Yes _____ No _____

b) Which ones? _____

c) How often in the past year? _____

3. Why do you shop at second-hand stores.

_____ cheaper

_____ get what I want here (e.g., fashion, antiques)

_____ better quality

_____ environmentally preferable

_____ other (specify) _____

4. What are some disadvantages to shopping at second-hand stores?

_____ items need repair

_____ items need cleaning

_____ poor quality

_____ no guarantees

_____ lack of variety

_____ other (specify) _____

5. Do you think there is a demand/market for more stores of this kind?

Yes _____ No _____ Don't Know _____

6. What level of schooling have you completed?

_____ university

_____ community college

_____ post-secondary technical, business, trade school

_____ high school

_____ less than high school

7. Into which category does your family income fall?

_____ less than \$8,000

_____ \$8,000 to \$15,000

_____ \$15,000 to \$22,000

_____ over \$22,000

_____ don't know

_____ refused to answer

8. Which age category do you belong to?

_____ under 18

_____ 18 - 25

_____ 26 - 40

_____ over 40

_____ refused to answer

POST CONSUMER PRODUCT SHOPPERSSURVEY ANALYSISMethod:

The sample consists of shoppers interviewed as they were leaving second-hand shops. Shops were selected from the Yellow Pages and through personal knowledge of the researcher. Thus, there was no randomization in the shop selection process. It is estimated that the sample represents between one-third and one-quarter of such shops in the City of Toronto.

Survey data are broken down and presented by type of outlet - fashion or utilitarian - as follows:

<u>Fashion Shops Sampled</u>	<u>Utilitarian Shops Sampled</u>
Amelia Earhardt	Adamson Appliances
Fashion Mime	Ex Toggery
Flying Down to Rio (2 outlets)	Frankel Clothing
Second Nature Boutique	Goodwill Services
The Day Before Yesterday	Junior League Opportunity Shop
	Salvation Army

Frequency Distributions

Question 1.a Is this the first time you have shopped here?

	Utilitarian %	Fashion %	Total %
Yes	29	36	32
No	71	62	67
Don't know	-	-	-
No response	-	2	1
	<hr/>	<hr/>	<hr/>
	100	100	100
	(45)	(39)	(84)

Question 1.b How many times have you shopped here in the past year?

	Utilitarian %	Fashion %	Total %
0	24	33	29
1 - 5	26	31	29
6 - 10	16	13	14
11 - 19	9	13	11
20 - 50	9	8	8
51 - 100	9	-	5
100+	7	3	5
	<hr/>	<hr/>	<hr/>
	100	100	100
	(45)	(39)	(84)

Question 2.a Do you shop at other second-hand stores?

	Utilitarian %	Fashion %	Total %
Yes	36	77	55
No	64	23	45
Don't know	-	-	-
No response	-	-	-
	<hr/>	<hr/>	<hr/>
	100	100	100
	(45)	(39)	(84)

Question 2.b Which ones?

	Utilitarian %	Fashion %	Total %
Mentioned: none	38	21	30
one	18	13	16
two	15	28	21
more than two	29	38	33
	<hr/>	<hr/>	<hr/>
	100	100	100
	(45)	(39)	(84)

NOTE: Other shops most frequently mentioned were Goodwill Services (25%) and Salvation Army (26%). Flying Down to Rio (13%) was most frequently mentioned among the fashion outlets and ranked third overall.

Question 2.c How often in the past year?

	Utilitarian %	Fashion %	Total %
0	36	27	31
1 - 5	20	10	15
6 - 10	18	36	26
11 - 19	9	13	11
20 - 50	16	15	15
51 - 100	2	-	1
100+	-	-	-
	<hr/>	<hr/>	<hr/>
	100	100	100
	(45)	(39)	(84)

Question 3. Why do you shop at second-hand stores?

	Utilitarian %	Fashion %	Total %
Cheaper	80	72	76
Get what I want	58	62	60
Better quality	18	23	20
Environmentally preferable	13	10	12
Other	11	18	14
	<hr/>	<hr/>	<hr/>
	n = 45	n = 39	N = 84

(Percentages total more than 100% due to multiple responses.)

Question 4. What are some disadvantages to shopping at second-hand stores?

	Utilitarian %	Fashion %	Total %
Items need cleaning	40	28	35
No guarantee	40	28	35
Items need repair	31	33	32
Lack of variety	31	26	29
Poor quality	13	21	17
Other	22	15	19
No disadvantages	11	6	8
	<hr/>	<hr/>	<hr/>
	n = 45	n = 39	N = 84

(Percentages total more than 100% due to multiple responses.)

Question 5. Do you think there is a demand/market for more stores of this kind?

	Utilitarian %	Fashion %	Total %
Yes	69	67	68
No	20	15	18
Don't know	11	13	12
No response	-	5	2
	<hr/>	<hr/>	<hr/>
	100	100	100
	(45)	(39)	(84)

Question 6. What level of schooling have you completed?

	Utilitarian %	Fashion %	Total %
University	29	28	29
Community College	9	-	5
Post-secondary	16	8	12
High School	31	48	39
Less than High School	16	13	14
No response	-	3	1
	<hr/>	<hr/>	<hr/>
	100	100	100
	(45)	(39)	(84)

Question 7. In which category does your family income fall?

	Utilitarian %	Fashion %	Total %
Less than \$8,000	31	31	31
\$8,000 to \$15,000	26	18	23
\$15,000 to \$22,000	9	8	8
Over \$22,000	18	13	15
Don't know	9	26	17
Refused to answer	7	2	5
No response	-	2	1
	<hr/>	<hr/>	<hr/>
	100	100	100
	(45)	(39)	(84)

Question 8. Which age category do you belong to?

	Utilitarian %	Fashion %	Total %
Under 18	2	18	10
18 - 25	11	38	24
26 - 40	38	33	36
Over 40	44	8	27
Refused to answer	4	-	2
No response	-	2	1
	<hr/>	<hr/>	<hr/>
	100	100	100
	(45)	(39)	(84)

Crosstabulation of Question 7 by Question 5.

Income by Perceived Demand/Market

Perceived Demand

Do you think there is
a demand/market for
more stores of this
kind?

	Less than \$8,000	\$8,000 to \$15,000	\$15,000 to \$22,000	Over \$22,000
Yes	64	80	86	62
No	20	10	14	37
Don't know	16	10	-	1
	<hr/>	<hr/>	<hr/>	<hr/>
	100%	100%	100%	100%
	(25)	(19)	(7)	(13)

N = 64

Don't know: 14

No response/refusals: 6

INTERVIEW SCHEDULE
POST CONSUMER PRODUCT
RETAILERS

Interview no. _____

DATE: _____

TIME: _____

PLACE: _____

Name of Interviewee: _____

1. When did you first start this business? 19 _____
2. For what reasons did you decide to go into this business?

3. By what means did you identify a market for your products?
 research _____
 gut feeling _____
 word-of-mouth _____
 other (specify) _____
4. a) Is the market for your products
 steady? _____ expanding? _____ contracting? _____
 over what period of time?
 b) Why? _____

5. a) What type of people buy your products?
 poor: _____ eccentric: _____
 young: _____ all types: _____
 trendy: _____ other (specify) _____
 b) Have you noticed any change in the nature of your
 customer population over the years?

6. What do you think is the public's attitude toward buying used goods which are still quite functional?

7. How much do you feel each of the following influences what people actually buy?

a) The media (film, TV, radio):

very							not at all
influential	0	1	2	3	4	5	influential

b) Advertising:

very influential 0 1 2 3 4 5 not at all influential

c) The Manufacturing Industry:

very influential 0 1 2 3 4 5 not at all influential

d) The Retail Industry:

very						not at all
influential	0	1	2	3	4	5 influential

e) Government:

very influential 0 1 2 3 4 5 not at all influential

8. What are your major sources of inventory?

individuals

institutions/companies

retailers

manufacturers

rag/scrap/junk dealers

auctions

other

9. a) Do you have difficulty keeping an adequate inventory?

often sometimes never

b) Why?

.....

c) How could this problem be remedied?

- d) Have there been any shifts in the supply situation over the years?

10. What, in your view, are the major barriers to expansion of this type of business?

public attitudes (markets) _____
Supply inconsistency _____
regulations/legislation (specify) _____
other (specify) _____

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INTERVIEW SCHEDULEFURNITURE & APPLIANCESNEW PRODUCT RETAILERS

INTERVIEW NO.: _____

DATE: _____

TIME: _____

PLACE: _____

NAME OF INTERVIEWEE: _____

INTRODUCTION:

Hello, my name isfrom EiS, a consulting research firm. We're conducting some research into consumer and retailer attitudes and would like to ask you a few questions. Your responses will remain strictly confidential.

1. Please rank the following problems in order of severity, ranking the problem of greatest concern number 1, that of least concern number 6. (hand respondent sheet #1)
2. Taking a closer look at environmental degradation and resource depletion, could you rank the following concerns in order of priority, "1" being most important and "4" being least important. (hand respondent sheet #2)
3. a) Do you feel that you or your business (company) can play a role in the solution to some of these problems?
 Yes _____ No _____
 b) In what way? _____

4. a) On what basis do you select the products which you stock?
 _____ price _____ durability _____
 _____ appearance/style _____ demand _____
 _____ product-associated promotion _____

b) How do you determine durability or demand?

5. a) Are you aware of any products you stock which contain recycled material? Yes _____ No _____

b) Which products? _____

6. Do you feel that recycled content affects:

a) The quality of the product? Yes _____ No _____

b) The public's perception of the product?

Yes _____ No _____

c) In which way? _____

7. a) Do you feel more use should be made of recycled materials in the manufacture of...

appliances? Yes _____ No _____ don't know _____

Furniture? Yes _____ No _____ don't know _____

8. a) Do you feel greater emphasis should be placed on product durability? Yes _____ No _____

b) Would customers be willing to pay extra for greater product durability? Yes _____ No _____

PROBE: - consumer indifference curve; durability/
cost relationship

- c) Would retailers be willing to promote products more on the basis of durability?

Yes _____ No _____

- d) How might this best be done?

- e) What are the major barriers to achieving greater product durability?

PROBE: - technology
- economical consequences to retailers
- vertical integration of industry
- lack of product and/or supplier diversity

9. How much impact do you feel retailers, as a group, could have in determining product specifications at the manufacturing/wholesale level?

10. a) Do you deliver your own products to the customer's home?

Yes _____ No _____

- b) Do you provide for removal of the replaced product (if the customer requests)?

Yes _____ No _____

- c) What do you do with it?

- d) Would you be willing to do so if your added costs (but no profit margin) could be covered?

Yes _____ No _____ Other _____

11. Are you aware of any operators who repair/restore for resale, used furniture and appliances?

No _____ Yes _____ (list) _____

12. Do you consider these operators as competitors for your customers?

Yes _____ No _____

13. Would retailers be willing to act as suppliers of inventory for these second-hand operators?

Yes _____ No _____

14. a) In general, what do you think is the consumer's attitude toward conservation of resources, recycling of materials and extending the life of consumer products?

very										not at all
concerned	0	1	2	3	4	5				concerned

- b) Your supplier's attitude?

very										not at all
concerned	0	1	2	3	4	5				concerned

15. How much influence do you think each of the following has in determining what people actually buy?

- a) The media:

very										not at all
influential	0	1	2	3	4	5				influential

- b) Advertising:

very										not at all
influential	0	1	2	3	4	5				influential

- c) Manufacturing industry:

very										not at all
influential	0	1	2	3	4	5				influential

- d) Your suppliers:

very										not at all
influential	0	1	2	3	4	5				influential

e) Retailers

very
influential

0 1 2 3 4 5

not at all
influential

f) Government

very
influential

0 1 2 3 4 5

not at all
influential

SHEET NO. 1:

	<u>Rank</u>
Threat of War
Racial Discrimination
Environmental Degradation (Pollution)
Economic Recession
Resource Depletion
Increase in Crime & Violence

- 1 = Most Severe Problem
6 = Least Severe Problem

SHEET NO. 2

Rank

Air Pollution
Water Pollution
Noise Pollution
Solid Waste (garbage)

1 = Of Greatest Concern

4 = Of Least Concern

